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Cognitive Appraisal as a Mechanism Linking Negative Organizational Shocks and Intentions to Leave

ABSTRACT

The past two decades have seen a significant rise in both frequency and size of mergers and acquisitions in the U.S., many of which have been associated with considerable interruption of organizational activities and a host of negative outcomes for employees. In this study of 763 U.S. based airline employees, we identify threat appraisal as a key mechanism explaining the relationship between four change related variables (quality of change communication, procedural fairness in restructuring, change management history, & anxiety about change) and employee turnover intentions. Results indicate that turnover intentions are influenced by quality of change communication, procedural fairness in restructuring, and anxiety about change as mediated by threat appraisal. We also found that job embeddedness moderated the relationships of quality of change communication and procedural fairness in restructuring with threat appraisal. Our focus on malleable levers of withdrawal offers theoretical and practical insights into how turnover intentions can be influenced.

KEYWORDS: Withdrawal, Turnover Intentions, Threat Appraisal, Organizational Shocks

Cognitive Appraisal as a Mechanism Linking Negative Organizational Shocks and Intentions to Leave

Despite significant resources expended to manage organizational change, it is often associated with considerable interruption of organizational activities and a host of negative outcomes for employees. For instance, nearly half of mergers and acquisitions (M&As) fail to meet stated objectives (Seo & Hill, 2005), and research has shown that organizational change often motivates employee withdrawal, illness, and stress (Fugate, Kinicki, & Prussia, 2008; Fried, Teigs, Naughton, & Ashforth, 1996; Newman & Krzystofiak, 1993). However, some employees feel these traumatic effects more than others due to how they interpret the change and the context in which it is framed (Fugate, Prussia, Kinicki, 2012). These fundamental differences can be highly consequential as the likelihood of a merger or acquisition being successful is greatly diminished when key employees decide to leave the organization, especially in knowledge-based organizations where human capital is a particularly valuable asset. It is therefore critically important for academicians and practitioners to understand the factors and processes that employees consider when their organization is involved in M&A activity. This is the overarching goal of the current paper.

In this endeavor, we draw from appraisal theory to gain a better understanding of shocks outlined in the unfolding model of turnover (Lee & Mitchell, 1994), and shed light on why employees respond to organizational change in different ways. The unfolding model pioneered the idea that individual voluntary turnover decisions are often driven by shocks: clearly distinguishable, jarring events that enact intrapsychic analyses involved in quitting. Identifying mechanisms that can be used to affect the outcome of these analyses is critical for organizations seeking to optimize employee reactions in favor of the change.

To clarify, the unfolding model was developed to help deepen our understanding of voluntary turnover, as previous models of “accumulated dissatisfaction” were insufficient for explaining the variability in voluntary employee exits (Holtom, Mitchell, Lee, & Inderrieden, 2005). We take a similar approach in this paper and link appraisal theory to the unfolding model to better understand why some employees intend to quit when confronted with the same shock (a merger) and others do not. As such, cognitive appraisal applies an individual employee oriented lens to the unfolding model and boosts its explanatory power (cf. Smith & Kirby, 2009). It does this by providing a cognitive component to the unfolding model that elucidates how employees evaluate or appraise shocks in the context of change.

This is particularly important since the majority of turnover scholarship has focused on stable traits and contextual factors demonstrating little plasticity. For instance, Morrell, Laon-Clarke, and Wilkinson, (2004) examined positive shocks (e.g., pursuing graduate studies) that tend to be expected, personal, and leading to unavoidable turnover. Similarly, Donnelly and Quinn (2006) identified economic factors and gender as moderators between shocks and turnover. While this work has certainly advanced our understanding of the turnover process, its focus on variables outside of the control of employees and managers has limited development of the unfolding model. We take a different approach by considering how a negative organizational shock (i.e., an acquisition) affects predictors of turnover intentions that are malleable and subsequently offer theoretical and practical implications for mitigating some of its potentially deleterious effects.

The announcement of M&As associated with planned downsizing is particularly desirable for studying organizational shocks because they: (1) are common organizational events that affect all employees in a particular context in some way; (2) meet the fundamental

requirement of a shock being “sufficiently jarring that it cannot be ignored” (Lee & Mitchell, 1994, p. 60); and (3) reveal individual variation in responses. M&As are particularly important from a turnover perspective because they engender a number of negative consequences. For instance, M&As have been associated with reduced control, and increased feelings of threat, separation anxiety, and uncertainty (Astrachan, 2004, Burlew, Pederson, & Bradley, 1994; Schweiger & DeNisi, 1991). More recently, in a study of manufacturing firms, Siegel and Simons (2010) found a rapid increase in turnover immediately following M&As. Thus, while M&As may be seen as favorable by shareholders, we expect employees to show more variation in attitudes, perceptions, and behaviors.

In general, we propose that a negative organizational shock, such as a merger or acquisition that results in layoffs, will initiate a cognitive appraisal process to evaluate the significance of the change-related shock. Cognitive appraisal represents an individual’s assessment of the meaning of an event for his or her personal well-being (Tomaka, Blascovich, Kelsey, Leitten, 1993; Tomaka, Blascovich, Kibler, & Ernst, 1997). Appraisals therefore are cognitive representations of the interaction between a person and various contextual factors. In the work context, *threat appraisal* represents the extent to which an employee feels that work related benefits, opportunities, and conditions are at risk or may be jeopardized in the future (Fugate, Prussia, & Kinicki, 2012). Therefore, threat appraisals ascribe meaning to events, which precede physiological responses and have the ability to be influenced by mutable organizational processes (e.g., procedural fairness) as well as idiosyncratic perceptions derived from prior experience (e.g., change history).

We argue that employees’ change-related cognitions modulate their experience of and reactions to change and proffer threat appraisal as a critical determinant of whether or not a

shock will initiate the turnover process. In this effort, we contribute to the literature on major organizational change and M&As in four important ways. First, we examine threat appraisal as a cognitive marker of M&A related shocks and link these to employee turnover intentions. This perspective gives some insight into the unfolding process by describing how and why individuals experiencing the same shock may respond quite differently. Second, we expand conceptualizations of how threat appraisal affects turnover intentions in the context of M&As in two ways: one is by considering a broader set of antecedents to threat appraisals; the other is by considering a key moderator that might help explain when individuals are more or less likely to interpret shocks as threatening. Third, we examine levers (i.e., predictors) of threat appraisal that are controllable by both managers and employees, thereby advancing theoretical and practical insights into how turnover intentions can be influenced. Fourth, and more generally, considering both the theoretical and empirical relationships between threat appraisals and organizational shocks makes this study unique and adds to the knowledge provided by existing research that explores the relationship between threat appraisals and withdrawal (e.g., Fugate et al., 2012; Michela & Vena, 2012). We thus fill a notable void in the literature on employee turnover by offering a more thorough theoretical explication of this relationship along with an empirical test.

Shocks, Threat Appraisal, and Intentions to Leave

The process of cognitive appraisal is particularly salient to our discussion of shocks because “differences in appraised situational meaning explain why persons have different emotional responses to the same objective situation” (Tomaka et al., 1997, p. 70). Put differently, considering cognitive appraisal implications for Lee and Mitchell’s (1994) unfolding model is necessary if we are to better understand the effect of shocks on intrapsychic processes that give meaning to a situation and subsequently explain incremental variance in turnover. Situational

meaning, a central aspect of cognitive appraisal theory, refers to how an individual makes sense of, and finds relevance in, ongoing events (Smith & Kirby, 2009; Tomaka et al., 1997). In the context of organizational change, it is this meaning or appraisal of the situation that determines individuals' subsequent reactions, such as withdrawal (Fugate et al., 2012), emotions (Kiefer, 2005), and coping (Scheck & Kinicki, 2000). Research has shown that situational meaning and thus appraisals can be influenced by "manipulating the way a task or situation is framed" (Tomaka et al., 1997, p. 70). By understanding how to affect the manner in which a shock (e.g., M&A activity) is appraised, we can further explain why such shocks lead some to think about leaving more than others.

Cognitive Appraisal Theory and the Activation of the Turnover Process

When major organizational changes such as M&As are perceived as having the potential to make things worse for the employee in the future, then they are appraised as threats. Such threats may be due to potentially losing relationships (e.g., valued co-workers who are either downsized or relocated), opportunities (e.g., one may have anticipated a promotion in the "old" independent company but this is now in jeopardy), and of course employment (e.g., many mergers include job cuts). Among the many potential reactions to such threat appraisals is to withdraw, and in its most extreme form—quit.

Although psychology and health research has investigated other forms of appraisals (e.g., challenge & harm), and some scholars have variously conceptualized and tested negative appraisals of organizational change (e.g., Fugate et al., 2008; Scheck & Kinicki, 2000), we have particular interest in threat appraisals. This type of appraisal is an indicator of potential loss in the future and thus captures employees' future-oriented concerns. This future orientation allows managers to be proactive in addressing employee concerns and mitigating undesirable reactions,

such as the involuntary exit of valued employees. Unfortunately, however, scholarship on threat appraisal and employee withdrawal remains sparse, save few recent examinations (Fugate et al., 2008; Fugate, Harrison, & Kinicki, 2011; Fugate et al., 2012; Michela & Vena, 2012).

Fugate et al. (2008) examined the aggregate effect of perceptions of threat and harm, termed negative appraisals, on employee withdrawal. Results showed that an employees' appraisal of a situation impacts voluntary turnover through a mediated pathway involving emotions, coping, sick time, and quit intentions. In a similar study, Fugate et al., (2011) found that negative appraisals affected turnover through control coping and quit intentions. More recently, Fugate et al., (2012) found negative relationships between threat appraisals and two change related variables: change-related fairness and positive change orientation. They also found threat appraisals to be positively related to absenteeism and intentions to quit, which predicted voluntary turnover. Michela and Vena (2012) provide a dependence-regulation account of withdrawal reactions to major organizational change. The authors found that employees may attempt to devalue or otherwise withdraw from the employment relationship when facing significant threat, such as M&A activity.

Generally, this work has shown that negative appraisals are related to employee withdrawal. However, there are key opportunities to advance our understanding of how these appraisals are formed and how they ultimately lead to withdrawal. Utilizing cognitive appraisal theory allows us to provide a new and unique perspective on why employees facing the same situation may respond quite differently. Further, existing organizational change research suggests that there are several important, yet unexamined factors that may contribute to how employees appraise a potentially threatening situation. Identifying these potential mechanisms of withdrawal is particularly important from an organizational perspective because cognitive

appraisals have been shown to be malleable and therefore within the influence of managers. For example, more positive cognitive appraisals have been garnered by manipulating the way in which a situation or task is communicated, increasing procedural fairness, and altering individual expectations of successful outcomes (Lazarus et al., 1965; Tomaka et al., 1997; Feinberg & Aeillo, 2010). The current paper examines the connection between appraisals and the unfolding model of turnover by conceptually linking shocks and appraisals.

In what follows, we present several person and contextual factors derived from research on organizational change and address their indirect effects on turnover intentions through threat appraisals. Specifically, we examine predictors of turnover intentions including quality of change communication, procedural fairness in restructuring, change management history, and anxiety about change. These variables were chosen because they allow us to consider both person and contextual factors, and thus are fundamental to appraisal theory. They are also specific to the context of organizational change and allow for some degree of manipulation or change by management. Moreover, prior scholarship has demonstrated that such factors may be related to the withdrawal process in the context of change (e.g., Rafferty and Restubog, 2010; Seo & Hill, 2005). We attempt to build off of this research by looking at the effects of these change variables on turnover intentions through the lens of appraisal theory and examining the extent to which threat appraisal mediates these relationships.

Next, we discuss the possibility that how individuals are situated in the organizational context may affect their interpretation of change as threatening. For instance, turnover research suggests that the extent to which individuals are enmeshed in a web of connections that attach them to their organization (i.e. job embeddedness) can buffer the negative effects of shocks (Burton, Holtom, Sablinski, Mitchell, & Lee Burton, 2010) and play an important role in how

employees interpret organizational events (Allen, 2006). We contend that this factor may also influence how employees interpret and respond to organizational attempts to manage change during M&A activity. Therefore, we consider the possibility that job embeddedness moderates the relationships of our change variables with threat appraisal. Figure 1 displays the hypothesized research model.

[Insert Figure 1 about here]

Shocks and Predictors of Threat Appraisal

Quality of Change Communication

In a recent study on the impact of M&As on turnover, Rafferty and Restubog (2010) found high quality change communication to be negatively related to withdrawal, with affective commitment to change mediating this relationship. The authors define and measure quality of change communication as the aggregate of two forms of communication: formal and informal. The first is defined as a programmatic approach involving formal activities that convey information hierarchically with the purpose of instilling positive attitudes toward change and employee compliance (Russ, 2008). The second is defined as “informal change communication processes as ad hoc efforts by leaders to communicate with employees about change, which are not carefully designed and standardized by the organization” (Rafferty & Restubog, 2010, p. 1312).

According to cognitive appraisal theory, a threat appraisal is more likely when people feel they do not have the adequate resources to deal with a potential stressor. Given that access to quality information has been established as a vital resource to employees, linked to myriad benefits such as greater mobility (Podolny & Baron, 1997), higher salary (Boxman, De Graaf, & Flap, 1991), and even improved performance ratings (Sparrowe, Liden, Wayne, & Kraimer,

2001), it likely plays an important role in the appraisal process. More specifically, as employees attempt to give meaning to a merger or acquisition by acquiring and synthesizing information, perceptions of low quality change communication will likely increase feelings of inadequate resources and subsequently lead to greater appraisals of threat. On the other hand, perceptions of high quality change communication are expected to reduce feelings of threat by increasing an employee's resource base and promoting the belief that the organization can be trusted. Even when the information being received is unfavorable, employees may feel more secure in knowing that it is an accurate portrayal of the situation. This allows them to devote fewer cognitive resources to information dissemination and interpretation and to focus more on problem solving.

Therefore, quality of change communication is particularly relevant to our discussion of threat appraisal. It can modulate the way in which one perceives and ascribes meaning to a situation by providing employees with important contextual information about the change. In other words, employees may not be able to control their situation, but high quality change communication can help them to feel that they have adequate resources to endure through the change and it gives them a frame in which to interpret the change. Thus, providing employees with high quality change communication should positively influence employees' appraisals and reactions by informing the meaning they ascribe to the change.

Hypothesis 1a: Quality of change communication will be negatively related to threat appraisal.

Procedural Fairness in Restructuring

Fair treatment is ubiquitous in the employer-employee relations literature and is a burgeoning topic among organizational change scholars (Rodell & Colquitt, 2009). It provides

legitimacy to organizational actions, increases trust toward leadership by making future events more controllable and predictable, and is linked with turnover intentions (Lind, 2001; Tyler & Lind, 1992; Van den Bos, 2001a; Lind & Van den Bos, 2002; Thibaut & Walker, 1975, Fugate et al., 2012). Moreover, the way in which one perceives fair treatment plays a prominent role in the appraisal literature. For example, Barsky, Kaplan, & Beal (2011) argued that fairness perceptions affect the appraisal process in such a way that it colors how individuals perceive events. When an event involves low certainty or control, such as when someone perceives unfair treatment, it tends to be associated with appraisals of fear or threat (Smith & Ellsworth, 1985).

The procedural dimension of fairness relates to the procedures and processes involved in decision making and is assessed based on whether these are considered to be unbiased, consistent, accurate, correctable, and open to employee input (Leventhal, 1980; Thibaut & Walker, 1975). The absence of these qualities often promotes feeling of uncertainty. Procedural fairness abates these reactions by giving employees a sense of voice in the decision-making process and by signaling “management respect and value for employees” (Fugate et al., 2012, p. 8). Procedural fairness thus operates as a proxy for trust – an employee’s willingness to accept vulnerability based on positive expectations of management intentions and actions (Mayer, Davis, & Schoorman, 1995) – as it is more readily observable and allows for quick judgments based on “whatever fairness information is first gathered or is most interpretable” (Colquitt, Scott, Judge, & Shaw, 2006, p. 112). Accordingly, even following the shock of downsizing associated with M&A activity, an obviously undesirable outcome, employees will likely respond more favorably if the procedures for such reduction in force decisions are perceived as fair.

Hypothesis 1b: Change-related procedural fairness will be negatively related to threat appraisal.

Change Management History

Although change paradigms have generally taken a macro-systems approach (Judge, Thoreson, Pucik, & Welbourne, 1999), there is a growing body of research emphasizing the importance of individual experience with change (e.g., Oreg, Michel, & By, 2012; Rafferty & Restubog, 2010; Stanley, Meyer, & Toplnytsky, 2005; Wanberg & Banas, 2000; Wanous, Reichers, & Austin, 2000). For instance, Stanley et al. (2005) found cynicism about organizational change to antecede resistance to change. Wanous et al. (2000) argued that cynicism is a response to a history of equivocally unsuccessful change attempts. Similarly, Rafferty and Restubog (2010) held that employees with negative change history experience at their current organization would be more likely to expect a merger to be poorly managed and ultimately unsuccessful. Even within the same organizational context, individual employees can have very different change experiences, and can perceive change very differently.

While the impact of change management history on threat appraisal has not been directly examined in an organizational setting, Gioia and Chittipeddi (1991) found that employees involved in a strategic initiative attempted to ascribe meaning, retrospectively, to events, threats, and opportunities. They searched for patterns of significant meaning based on prior experience and used them to rationalize the on-going situation. In other words, appraisals of threat were dependent upon a subjective assessment of the change event, which was influenced by previous experience. Because cognitive appraisal is based in large part on expected outcomes informed by previous experiences, it is possible that perceptions of positive change management history will drive more favorable estimations of the change.

Hypothesis 1c: Positive perceptions of prior change management history will be negatively related to threat appraisal.

Anxiety about Change

In a thorough review of the M&A literature, Seo and Hill (2005) found anxiety to be a pervasive characteristic of employees' M&A experience. Indeed, research has shown that even the possibility of an acquisition triggers anxiety in most employees – regardless of whether they are from the acquiring or acquired firm (Cartwright & Cooper, 1993b; Buono & Bowdich, 1989; Emmanouilides & Giovanis, 2006). This is due, in part, to the inevitable changes in working conditions that take place as a result of M&A activity. For instance, employees of newly acquired organizations are often encouraged to “let go” of past affiliations and practices to move toward new identifications and behaviors (Bridges, 1991). To the extent that employees have become accustomed to the way things are done and hold a positive bias toward members of their own organization (e.g., Turner, 1982), they are likely to be anxious about the change. Even when imposed changes are objectively beneficial (e.g., better equipment, pay, & benefits), employees may still feel anxious until they are able to appraise the situation as non-threatening. As a consequence, stress-laden employees often become preoccupied with how M&A activity will affect aspects of their jobs, identities, and values (Marks & Mirvis, 1992; Ivancevich, Schweiger, & Power, 1987; Sutton, 1987). Therefore, we expect anxiety about change to permeate an individual's change experience with valence and other affect-differentiating details that in turn affect one's appraisal of a situation.

Hypothesis 1d: Anxiety about change will be positively related to threat appraisal.

Threat Appraisal and Turnover Intentions

Turnover intentions, a proximal antecedent of turnover, represent an employee's desire to exit the organization (Griffeth, Hom, & Gaertner, 2000). Despite studies linking M&As to withdrawal (e.g., Siegel & Simons, 2010; Rafferty & Restubog, 2010), research on the mediating role of threat appraisal remains limited.

However, Fugate et al. (2012), drawing from protection motivation research (e.g., Eppright, Hunt, Tanner, & Franke, 2002), tested a model in which threat appraisal brought on by change was found to indirectly effect turnover through quit intentions. The authors posit that "perceived threats predict intentions to withdraw from a situation and to avoid the source of threats" (Fugate et al., 2012, p. 9). This is not surprising as job-related shocks that are interpreted to be negative are more often the immediate cause of turnover than job dissatisfaction (Holtom, Mitchell, Lee, & Inderrieden, 2005). Thus, it is expected that employees perceiving change as more threatening will be more likely to withdraw to some degree – the extent of which likely depends the level of perceived risk associated with work related benefits, opportunities, and conditions.

Hypothesis 2a: Threat appraisal will be positively related to turnover intentions.

Hypothesis 2b-e: Threat appraisal will partially mediate the relationships of quality of change communication (2b), procedural fairness in restructuring (2c), change management history (2d), and anxiety about change (2e) with turnover intentions.

Moderator: Job Embeddedness

As noted earlier, we suggest that the manner in which an individual is situated in an organizational context is likely to buffer the stressor-strain relationship and moderate relationships with threat appraisal. In particular, we focus on the extent to which the individual is enmeshed in a web of connections within the organization or job embeddedness. This is a

potential moderator that has been shown to play a role in the withdrawal process and may be likely to influence how individuals appraise potential threats.

Job Embeddedness

Job embeddedness describes how individuals can become enmeshed in a web of connections that link them to their organization and influence their decision to stay. It consists of the links an employee has to other people or groups in the organization or community, how the employee fits within the organization or community, and what the employee would be forced to sacrifice upon leaving the organization, both on and off-the-job (Mitchell, Holtom, Lee, Sablynski, & Erez, 2001). Therefore, it is an aggregate multidimensional construct that incorporates both on and off-the-job forces that influence decision making. However, our focus in the current study is on factors that fall within the domain of an organization's control, and as such we focus only on on-the-job aspects of job embeddedness.

Job embeddedness developed, in part, out of Lee and Mitchell's (1991, 1994) work on the unfolding model. It became clear from early investigations of the unfolding model that there are multiple ways of leaving and that job satisfaction is only one factor driving this choice (Lee, Mitchell, Wise & Fireman, 1996; Lee, Mitchell, Holtom, McDaniel & Hill, 1999). However, it wasn't entirely clear why employees chose to stay. Mitchell et al.'s (2001) seminal work on job embeddedness helped address this issue by demonstrating how employees can become stuck in their organization (i.e., via links, fit, and sacrifice) and subsequently stay despite facing undesirable circumstances.

Based on this work, Mitchell and Lee (2001) initiated a review of the unfolding model to determine the extent to which job embeddedness influences whether people initiate and complete the process of leaving and which path they might take. Through this exploratory process, they

formed a set of predictions predicated upon the idea that job embeddedness buffers the effects of shocks. Findings supported this notion with highly job embedded employees having fewer thoughts about leaving in response to a shock than their lower embedded counterparts. This research helped to integrate the unfolding model with job embeddedness and demonstrated that fit, links and sacrifice interact with the unfolding process by changing the way individuals perceive shocks, search for alternatives, and evaluate those alternatives.

Over the last 15 years, a number of researchers have demonstrated the utility of job embeddedness as a predictor of important organizational outcomes such as voluntary turnover, absenteeism, positive organizational citizenship behaviors (OCBs), and performance (Allen, 2006; Felps, Mitchell, Hekman, Lee, Holtom, & Harmon, 2009; Lee, Mitchell, Sablinski, Burton, & Holtom, 2004). More recently, Burton et al. (2010) found that on-the-job embeddedness helped to reduce the impact of negative shocks on organizational citizenship and overall job performance. The authors suggested that a negative shock may cause individuals to think about leaving their job, but the effect of that shock should decrease the more one is job embedded.

It is important to note, however, that on-the-job embeddedness has been found to mediate the relationship between negative shocks and withdrawal behaviors (Holtom, Burton, & Crossley, 2012). Although we do expect there are direct effects among embeddedness and an employee's desire to leave, we feel it is more relevant to the current investigation to focus on the interaction of embeddedness with our four change related variables and threat appraisal.

We suggest that there are several ways in which job embeddedness can reduce the negative impact of major organizational change, such as M&As. According to cognitive appraisal theory, a threat appraisal is more likely when employees perceive that they do not have

adequate resources to deal with a potential stressor. However, embeddedness implies a central location in a network associated with important resources linked to the embedded employees' social capital. For instance, these employees tend to have more supportive networks, greater access to information and more power (Brass, 1984; Krackhardt, 1990). Thus, highly embedded employees should feel more secure in their ability to cope with change, thereby strengthening the negative relationships of quality of change communication, procedural fairness in restructuring, and change management history with threat appraisal and weakening the positive relationship of anxiety about change with threat appraisal.

More specifically, job embeddedness may strengthen the impact of perceiving quality communication from the organization about change because more embedded employees are likely to have access to additional sources of information that can confirm the veracity of organizational information and thereby increase its credibility and utility. More embedded employees may also feel the effects of fair procedures to a greater extent because they can see how they impact others within their extensive network and may be particularly concerned with how they affect their close positive ties. With respect to change management history, we posit that, even in cases where previous experiences with change have been less positive, more embedded employees face greater barriers to leaving the organization, and thus are motivated to interpret a change as less threatening in order to reduce cognitive dissonance. Finally, although embedded employees may still feel anxious about pending changes, we suggest that the more extensive resources and social capital associated with embeddedness may mitigate the extent to which more embedded employees associate this anxiety with threat.

Hypothesis 3: Job embeddedness will moderate the relationships of quality of change communication (3a), procedural fairness in restructuring (3b), change management history (3c), and anxiety about change (3d) with threat appraisal.

Methods

Participants and Procedures

Participants for this online survey included 763 employees of a large airline in the mid-south of the United States experiencing a major acquisition of several other airlines. The newly formed organization retained the name and many defining features of the dominant organization. While all employees were encouraged to contribute, participation was voluntary. At 24%, our response rate was deemed acceptable and normal for an Internet based survey (Anderson & Kanuka, 2003). Measures included quality of change communication, procedural fairness in restructuring, change management history, threat appraisal, turnover intentions, anxiety about change, job embeddedness, and job search. At the introduction of the survey, participants were directed to think about the recent acquisitions and restructures when responding. All participants were electronically notified that responses were anonymous and that at no time would they be made available to company personnel. In line with similar research (e.g., Amiot, Terry, & Callen, 2007), data were obtained approximately four months after the initial changes had begun. Participants were employed at all levels of the organization. Of the sample, 31% had been with the organization less than 3 years, 51.8% less than 5, 76.6% less than 7, 90.1% less than 10, and 100% less than 20.

Measures

Threat Appraisal was measured with seven items that consider the extent to which an employee perceives the following at risk: job stability, supervisor and coworker relationships,

desirability of an individual's job, opportunities at current employer, pay and benefits, and overall working conditions (Fugate et al., 2008). Participants were asked, "Due to the changes, to what extent do you feel each of the following is THREATENED – a possibility that it will get worse in the future?" Coefficient alpha for the seven-item scale was .89.

Change Management History was measured with eight items from Bordia, Restubog, Jimmieson, and Irmer (2007). Their scale tapped assessments of how the organization has handled previous organizational changes. An example item includes, "In my experience, [past] organizational change has been managed well." The reliability coefficient of the scale was .85.

Procedural Fairness in Restructuring was measured with fourteen items assessing one's perceived equity with regard to the procedures and processes involved in change related decision making (Mansour-Cole & Scott, 1998). A sample item is, "When decisions are made about job reductions and reassignments, management treats me with kindness and respect." Coefficient alpha for the seven-item scale was .96.

Quality of Change Communication was measured with five items assessing employee perceptions regarding the timeliness, accuracy, and usefulness of information received about the transition (Bordia, Hunt, Paulsen, Tourish, & DiFonzo, 2004). An example item is, "The official information I have received about the changes at [my current organization] has been useful." The reliability coefficient of the seven-item scale was .94.

Anxiety about Change was measured with three items that determine the level of concern an employee feels related to the transition (Miller & Monge, 1985). A sample item includes, "I feel anxious about possible changes that might occur at [my organization]." The reliability coefficient of the three-item scale was .87.

Global Job Embeddedness was measured with seven items assessing the extent to which an employee is tied to his or her organization through fit, links, and sacrifice (Crossley, Bennett, Jex, & Burnfield, 2007). This scale measures only on-the-job aspects of job embeddedness. A sample item is, “I am tightly connected to this organization.” The reliability coefficient of the scale was .91.

Turnover Intentions were measured with three items tapping individual thoughts of and intentions to leave the organization (Hom & Griffeth, 1992). A sample item is, “I intend to leave the organization during the next 12 months.” The reliability coefficient of the scale was .93.

Job Search was measured with six items assessing an employee’s efforts to find alternative employment (Blau, 1993). Subjects were asked to indicate the frequency with which they carried out each behavioral item within the last six months. A sample item is, “Contacted an employment agency, executive search firm, or state employment service.” The reliability coefficient of the scale was .92.

Results

Descriptive Statistics and Preliminary Analyses

Table 1 provides descriptive statistics, reliability coefficients, and correlation coefficients for all variables. Consistent with standards established by Lance, Butts, and Michels (2006) and Nunnally (1978) our measures show strong internal reliability coefficients with alphas ranging from .85 to .96. Examination of the variance inflation factors (VIF) show that multicollinearity is not a concern with all VIFs below five (Myers, 1990; Vogt, 2007).

We also conducted a confirmatory factor analysis using the sample covariance matrix as input to LISREL 8.8 (Jöreskog and Sörbom 1996). As shown in Table 2, the fit of the proposed measurement model was good ($\chi^2 = 2633.78$, $p = .00$; $df = 1013$; $RMSEA = .07$; $NNFI = .97$;

CFI = .98; SRMR = .06) and significantly better than a one-factor model in which all items loaded on one factor ($\chi^2 = 8046.31$, $p = .00$; $df = 902$; RMSEA = .18; NNFI = .89; CFI = .89; SRMR = .12; χ^2 difference test is significant at $p < .005$). All items in the proposed measurement model loaded highly as expected (.66 - .97) except for three negatively worded items in the change management history scale. However, a number of studies have examined the adverse effects that negatively worded items can have on respondents and the internal consistency of measures (e.g., Marsh, 1996). Spector (1992) warned against the use of negation (i.e., adding no or not) because it can confuse the reader and lead to an obverse response. Further, Barnette (2000, p. 369) stated that negatively worded items may not be “considered the exact opposite of directly worded items, and this is one of the major factors in the reduction of reliability and validity scores on surveys using mixed items.” Given the potential for confusion associated with the type of negation used in this scale and the relatively lower factor loadings, we omitted the three negatively worded items (retaining five items). The revised measurement model fit well ($\chi^2 = 2308.79$, $p = .00$; $df = 881$; RMSEA = .06; NNFI = .98; CFI = .98; SRMR = .05), and the revised change management history scale continued to exhibit good reliability ($\alpha = .91$). CFA results indicate that a method factor is not heavily influencing our findings.

Regression Analysis

To test Hypotheses 1 and 2, we used a bootstrapping method (Hayes & Preacher, 2014) that has been found to have higher power than the Sobel test or causal steps approach, while maintaining reasonable control over the Type I error rate. It is also preferred because it reduces the number of tests needed, avoids making the unwarranted assumption of normality of the sampling distribution of the relative indirect effect, and a growing body of evidence indicates that it performs well (Biesanz, Falk, & Savalei, 2010; Hayes & Scharkow, 2013). Relative

indirect effects were calculated using estimated coefficients obtained by repeatedly sampling (using 10,000 bootstrap samples) from our original population of 763 and estimating the indirect effect in each resampled data set. Bias-corrected and accelerated intervals were calculated to avoid issues with power that may arise when forced symmetry is imposed on ordinary confidence intervals and estimation inaccuracies associated with Type I errors (only the bias-corrected and accelerated intervals are shown in Table 3).

First, quality of change communication, procedural fairness in restructuring, change management history, and anxiety about change (X_1 , X_2 , X_3 , & X_4) were regressed onto threat appraisal (M). As shown in Table 3, quality of change communication and procedural fairness in restructuring are negatively related to threat appraisal ($-.22, p < .01$; $-.34, p < .01$), thus supporting Hypotheses 1a and 1b. While change management history is not related to threat appraisal ($.00, ns$), anxiety about change is positively related to threat appraisal ($.22, p < .01$). Therefore, Hypothesis 1c is not supported and Hypothesis 1d is supported. With the exception of change management history (Hypothesis 1c), our results indicate support for Hypothesis 1.

Second, turnover intentions (Y) were regressed onto threat appraisal, quality of change communication, procedural fairness in restructuring, change management history, and anxiety about change. Job search was used as control variable because it has been shown to account for a significant amount of variation in voluntary turnover (Blau, 1993). Table 3 summarizes the regression results. As hypothesized, threat appraisal is significantly and positively related to turnover intentions ($.21, p < .05$). Thus, Hypothesis 2a is supported.

Third, to test for mediation (Hypotheses 2b-e), we assessed direct and indirect effects of our change variables on turnover intentions as well as bias-corrected and accelerated intervals (seen in Table 3). A significant indirect effect is present when the 95% confidence interval does

not straddle zero. Based on the 10,000 bootstrap resample, the indirect effect of quality of change communication on turnover intentions through threat appraisal is negative and significant ($-.05$; BCa 95% CI = $-.08, -.02$), and the direct effect of quality of change communication on turnover intentions is not significant ($.02, ns$). In support of Hypothesis 2b, these results indicate that threat appraisal fully mediated the link between quality of change communication and turnover intentions.

Again, based on the 10,000 bootstrap resample, the indirect effect of procedural fairness in restructuring on turnover intentions through threat appraisal is negative and significant ($-.07$; BCa 95% CI = $-.12, -.04$), and the direct effect of procedural fairness in restructuring is not significant ($-.11, p < .05$). In support of Hypothesis 2c, these results indicate that threat appraisal partially mediated the link between procedural fairness in restructuring and turnover intentions. On the other hand, the indirect effect of change management history on turnover intentions through threat appraisal is not significant ($-.00$; BCa 95% CI = $-.03, .03$) while the direct effect is significant ($-.10, p < .05$). Contrary to Hypothesis 2d, threat appraisal does not mediate the link between change management history and turnover intentions.

Finally, the indirect effect of anxiety about change on turnover intentions through threat appraisal is positive and significant ($.05$; BCa 95% CI = $.03, .08$), and the direct effect of anxiety about change on turnover intentions remained significant ($-.09, p < .01$). In support of Hypothesis 2e, these results indicated that threat appraisal partially mediated the link between anxiety about change and turnover intentions. Therefore, we have partial support for Hypothesis 2.

In line with Cohen and Cohen (1983), we tested Hypothesis 3 with moderated regression analysis. Hypotheses 3a-d propose that job embeddedness will moderate the relationships of

quality of change communication, procedural fairness in restructuring, change management history, and anxiety about change with threat appraisal such that the relationships will be weaker when job embeddedness is high. As seen in table 4 (see also figure 2), the interaction term for quality of change communication and job embeddedness is significant (.18, $p < .05$). Additionally, the interaction term for procedural fairness in restructuring and job embeddedness is significant (-.72; $p < .01$; see figure 3). The results are in line with Hypotheses 3a and 3b.

Discussion

Our intent in this study was to investigate malleable levers of turnover intentions that would shed light on why individuals facing the same environmental conditions respond quite differently. Results indicate that employee reactions to change-related shocks can be predicted by quality of change communication, procedural fairness in restructuring, and anxiety about change. Further, job embeddedness moderated the relationships of quality of change communication and procedural fairness in restructuring with threat appraisal. These findings highlight the importance of change processes and contextual factors in relation to withdrawal.

Theoretical and Practical Implications

Utilizing cognitive appraisal theory allowed us to provide a novel perspective as to how and when shocks lead to turnover intentions, further increasing the utility of the unfolding model of turnover. In addition, we add to the relatively sparse literature that explores the relationship between threat appraisal and turnover intentions (e.g., Fugate et al., 2012; Michela & Vena, 2012); offer a thorough theoretical explication identifying threat appraisal as a key mechanism linking change-related shocks with turnover intentions; and offer an empirical test that identifies an important contextual moderator that helped explain when elements of change are seen as more or less threatening.

More specifically, we link the unfolding model to cognitive appraisal theory by describing how and why individuals experiencing the same shock may respond in different ways. In particular, employees were more likely to appraise a shock as threatening when it was accompanied by poor change communication, unfair decision making processes affecting restructuring, and elevated levels of anxiety relating to the change. Cognitive appraisal theory suggests that when employees feel that have adequate resources to deal with a potential stressor, they will be less likely to perceive it as a threat. We argued that the quality of change communication can modulate the way in which one perceives and ascribes meaning to an event by providing individuals with important contextual information about the change and a frame in which to interpret the change. Furthermore, perceptions of fairness can add some level of predictability about future events, thereby enhancing employee perceptions of trust and control over the situation. These perceptions play a vital role in the appraisal process and ultimately color the way in which events are interpreted. Similarly, anxiety about change plays an integral role in how individuals interpret organizational change. We argued that it permeates an individual's change experience with valence and other affect-differentiating details that in turn affect one's appraisal of a situation.

Although we expected change management history to affect threat appraisal, results indicated no relationship. While this was surprising, it may be that change history affects different mechanisms of withdrawal. For instance, Devos, Buelens and Bouckennooghe (2007) found that participants having a combination of poor change history and low trust also tended to have lower openness to change. Moreover, Rafferty and Restubog (2010) found the relationship between change history and turnover intentions to be mediated by affective commitment to change. This is an interesting area that would benefit from future research.

In addition to considering a broader set of antecedents to threat appraisals, we considered a key moderator, job embeddedness, that helped to explain under what conditions employees would consider a shock as threatening. Job embeddedness moderated the relationships of quality of change communication and procedural fairness in restructuring with threat appraisal. Our results show that the effects of high quality change communication and fair procedures are magnified when individuals are more embedded. We believe this is due, in part, to more embedded individuals having access to social capital and other resources that engender greater confidence in the veracity of organizational information and knowledge of how procedures are affecting others within their network. It appears that embeddedness is less relevant to one's prior experience with change management and for responding to anxiety. Future research into these processes, and associated moderating variables would shed additional insight into reactions to change-related shocks.

Furthermore, our examination of levers of threat appraisal that are amenable to manipulation or change by management provides insight into strategies that are likely to inhibit unwanted intentions related to withdrawal. Specifically, organizations can influence threat appraisals and thus turnover intentions by: (1) offering timely, accurate, and useful change information; (2) involving employees in restructuring decisions, using transparent procedures, and being empathetic to employees' concerns; and (3) abating anxiety through encouragement, and helping employees to integrate and identify with the newly formed organization. Combined, these insights emphasize the importance of focusing on the human side of M&As and suggest that threat appraisal is a key mechanism underlying employee reactions to organizational shocks.

Limitations and Future Research Directions

Several limitations to our study should be considered. First, we relied exclusively on the use of self-report measures, which raises concerns related to common method variance. Some correlation coefficients were not statistically significant or exceeding a baseline level recommended by Spector (2006), and CFA results suggest a method factor is not heavily influencing the results. Also, the significant interaction effects are not subject to the same common method concerns. However, future research collecting data from multiple sources would be valuable. A second limitation is our use of cross-sectional data, which prohibits causal inference, and also limits our ability to assess how individuals deal with change over time. Although implicit in our research design, conclusions made about causality were predominantly based on associating empirical evidence with extant theorizing, and we are unable to conclusively test the causal ordering of our variables. Future research would benefit from longitudinal data that allows for analysis of these variables over time.

Third, our data was collected four months after the initial changes had begun. Although this is in line with similar research (Amiot, Terry, & Callen, 2007), it is likely that change communication would be more developed over time than initial communications. Therefore, future research would benefit from data that is collected earlier in the change process.

Fourth, the use of turnover intentions rather than actual turnover has historically been viewed as a potential limitation. Although the value of turnover information is unequivocal, turnover intentions are appropriate in this setting because they provide important information about employee reactions to change while intervention is still feasible. It also excludes many of the confounding variables involved in translating intentions to behavior. Still, future research that

examines the extent to which threat appraisals lead to turnover behavior would be a useful extension of our work.

Fifth, we considered a limited numbers of variables affecting withdrawal. Other change mechanisms should be considered that might contribute to threat appraisal and inform our insignificant findings on threat appraisal. We responded to a call by Fugate et al. (2012) to explore not only other “contextually relevant antecedents but those that are also malleable and state-like,” and are hopeful that others will do the same. We also considered two potential moderators when there are other variables that could play similar buffering roles (e.g., supervisor support; organizational climate).

Sixth, in a review of employee turnover, Hom, Mitchell, Lee, & Griffeth (2012) identified two types of stayers (reluctant & enthusiastic). Reluctant stayers – those who remain because they feel they cannot leave, despite wanting to exit – and enthusiastic stayers – those who stay because they want to, although they have the ability to leave (Hom, Mitchell, Lee, & Griffeth, 2012). Although we expect that highly embedded employees are more likely to be enthusiastic stayers because of their abundant resources, it is possible that highly embedded employees can be reluctant stayers. Therefore, it may be worth investigating the extent to which potentially threatening events affect each type of embedded employee differently and if different types of embeddedness are likely to predict whether an employee will be a reluctant or enthusiastic stayer.

Last, we acknowledge that it is possible for job embeddedness to produce negative outcomes in response to organizational shocks. Since highly embedded employees have greater access to resources, it is possible that they may perceive that they have more to lose in the face of large-scale organizational change such as M&A activity. Subsequently, some highly embedded

employees may feel more rather than less threatened by organizational shocks. Thus, future research may benefit from an examination of when and how job embeddedness can be a detriment to employment relationships.

Conclusion

The results of this study further explicate why some employees facing the same shock will be likely to stay, and others will be likely to go. The unfolding model of turnover portrays withdrawal as a multifaceted process involving assessment of an individual's work environment, personal situation, and feelings. This process ultimately leads to a decision about turnover, but it has not been clear how managers can affect this outcome. We found quality of change communication, procedural fairness in restructuring, and anxiety about change to be important antecedents of threat appraisal that influence the decision process. Job embeddedness moderated several of these relationships and shed light on practical strategies for mitigating undesirable affective and physiological responses to shocks. We look forward to research that will provide further insight into this important and under-examined aspect of organizational change.

References

- Anderson, T., & Kanuka, H. 2003. *e-Research: Methods, strategies, and issues*. MA: Allyn & Bacon.
- Allen, D. G. (2006). Do organizational socialization tactics influence newcomer embeddedness and turnover?. *Journal of Management*, 32(2), 237-256.
- Amiot, C. E., Terry, J. D., & Callan, V. J. 2007. Status, equity and social identification during an intergroup merger: A longitudinal study. *British Journal of Social Psychology*, 46: 557-577.
- Astrachan, J. H. 2004. Organizational departures: The impact of separation anxiety as studied in mergers and acquisitions simulation. *Journal of Applied Behavioral Science*, 40: 91-110.
- Barnette, J.J. (2000). Effects of stem and Likert response option reversals on survey internal consistency: If you feel the need, there is a better alternative to using those negatively worded stems. *Educational and Psychological Measurement*, 60, 361-370.
- Barsky, A., Kaplan, S. A., & Beal, D. J. (2011). Just feelings? The role of affect in the formation of organizational fairness judgments. *Journal of Management*, 37(1), 248-279.
- Biesanz, J. C., Falk, C. F., & Savalei, V. (2010). Assessing mediational models: Testing and interval estimation for indirect effects. *Multivariate Behavioral Research*, 45(4), 661-701.
- Blau, G. (1993). Further exploring the relationship between job search and voluntary individual turnover. *Personnel Psychology*, 46(2), 313-330.
- Bordia, P., Hunt, E., Paulsen, N., Tourish, D., & DiFonzo, N. 2004. Uncertainty during organizational change: Is it all about control? *European Journal of Work and Organizational Psychology*, 13: 345-365.
- Bordia, P., Restubog, S. L. D., Jimmieson, N. L., & Irmer, B. 2007. Haunted by the past: Effects of poor change management history on employee attitudes and turnover. In L. Solomon (Ed.), *Best paper proceedings of the Academy of Management annual conference*. Academy of Management Proceedings and Membership Directory, Philadelphia 2007, Organization Development and Change Paper Abstracts.
- Boxman, E.A., De Graaf, P.M., & Flap, H. D. (1991). The impact of social and human capital on the income attainment of Dutch managers. *Social Networks*, 13(1), 51-73.
- Brass, D. J. (1984). Being in the right place: A structural analysis of individual influence in an organization. *Administrative Science Quarterly*, 518-539.
- Bridges, W. (1991). *Managing transitions*. Reading, MA: Addison-Wesley.

- Buono, A. F., & Bowditch, J. L. (1989). *The Human Side of Mergers and Acquisitions: Managing Collusions between People and Organizations*. San Francisco: Jossey-Bass.
- Burton, J. P., Holtom, B. C., Sablinski, C. J., Mitchell, T. R., & Lee, T. W. (2010). The buffering effects of job embeddedness on negative shocks. *Journal of Vocational Behavior*, 76(1), 42-51.
- Cartwright, S., & Cooper, L. C. 1993b. The psychological impact of mergers and acquisitions on the individual: A study of building society managers. *Human Relations*, 46(3), 327-47.
- Colquitt, J. A., Scott, B. A., Judge, T. A., & Shaw, J. C. 2006. Justice and personality: Using integrative theories to derive moderators of justice effects. *Organizational Behavior and Human Decision Processes*, 110-127.
- Crossley, C. D., Bennett, R. J., Jex, S. M., & Burnfield, J. L. (2007). Development of a global measure of job embeddedness and integration into a traditional model of voluntary turnover. *Journal of Applied Psychology*, 92(4), 1031.
- Devos, G., Buelens, M., & Bouckenoghe, D. 2007. Contribution of content, context, and process to understanding organizational change: Two experimental simulation studies. *Journal of Social Psychology*, 147: 607-629.
- Donnelly, D.P., & Quinn, J.J. 2006. An extension of Lee and Mitchell's unfolding model of voluntary turnover. *Journal of Organizational Behavior*, 27: 59-77.
- Emmanouilides, X. C., & Giovanis, N. (2006). The human factor as reason of failure of mergers and acquisitions. *Journal of Business & Society*, 19, 221-234.
- Eppright, D. R., Hunt, J. B., & Tanner, J. F. Franke gR (2002) Fear, coping and information: a pilot study on motivating a healthy response. *Health Marketing Quarterly*, 20(1), 51-73.
- Feinberg, J. M., & Aiello, J. R. (2010). The effect of challenge and threat appraisals under evaluative presence. *Journal of Applied Social Psychology*, 40(8), 2071-2104.
- Felps, W., Mitchell, T. R., Hekman, D. R., Lee, T. W., Holtom, B. C., & Harman, W. S. (2009). Turnover contagion: How coworkers' job embeddedness and job search behaviors influence quitting. *Academy of Management Journal*, 52(3), 545-561.
- Forgas, J. P. (Ed.). (2000). *Handbook of affect and social cognition*. Psychology Press.
- Fried, Y., Tiegs, R. B., Naughton, T. J., & Ashforth, B. E. (1996). Managers' reactions to a corporate acquisition: A test of an integrative model. *Journal of Organizational Behavior*, 17(5), 401-427.
- Frijda, N. H. (2000). The psychologists' point of view. *Handbook of emotions*, 2, 59-74.

- Fugate, M., Harrison, S., & Kinicki, A. J. (2011). Thoughts and Feelings About Organizational Change: A Field Test of Appraisal Theory. *Journal of Leadership & Organizational Studies*, 18(4), 421-437.
- Fugate, M., Kinicki, A. J., & Prussia, G. E. (2008). Employee coping with organizational change: An examination of alternative theoretical perspectives and models. *Personnel Psychology*, 61(1), 1-36.
- Fugate, M., Prussia, G. E., & Kinicki, A. J. 2012. Managing employee withdrawal during organizational change: the role of threat appraisal. *Journal of Management*, 38(3), 890-914.
- Gioia, D. A. & Chittipeddi, K. 1991. Sensemaking and sensegiving in strategic change initiation. *Strategic Management Journal*, 12(6): 433-448.
- Griffeth, R. W., Hom, P. W., & Gaertner, S. (2000). A meta-analysis of antecedents and correlates of employee turnover: Update, moderator tests, and research implications for the next millennium. *Journal of Management*, 26(3), 463-488.
- Hayes, A. F., & Preacher, K. J. (2014). Statistical mediation analysis with a multicategorical independent variable. *British Journal of Mathematical and Statistical Psychology*, 67, 451-470.
- Hayes, A. F., & Scharkow, M. (2013). The relative trustworthiness of tests of indirect effects in statistical mediation analysis. Does method really matter? *Psychological Science*, 24, 1918-1927.
- Holtom, B. C., Burton, J. P., & Crossley, C. D. (2012). How negative affectivity moderates the relationship between shocks, embeddedness and worker behaviors. *Journal of Vocational Behavior*, 80(2), 434-443.
- Hom, P.W. & Griffeth, R.W. 1991. Structural equations modeling test of a turnover theory: Cross-sectional and longitudinal analyses. *Journal of Applied Psychology*, 76: 350-366.
- Hom, P. W., Mitchell, T. R., Lee, T. W., & Griffeth, R. W. (2012). Reviewing employee turnover: focusing on proximal withdrawal states and an expanded criterion. *Psychological Bulletin*, 138, 831-858.
- Ivancevich, J. M., Schweiger, D. M., & Power, F. R. (1987). Strategies for managing Human Resources during Mergers and Acquisitions. *Human Resource Planning*. 10 (1), 19-35.
- Jöreskog, Karl G. and Dag Sörbom (1996), *LISREL 8: Structural Equation Modeling with the SIMPLIS Command Language*, Hillsdale, NJ: Lawrence Erlbaum.

- Judge, T. A., Thoresen, C. J., Pucik, V., & Welbourne, T. M. 1999. Managerial coping with organizational change: A dispositional perspective. *Journal of Applied Psychology*, 84: 107-122.
- Kiefer, T. (2005). Feeling bad: Antecedents and consequences of negative emotions in ongoing change. *Journal of Organizational Behavior*, 26(8), 875-897.
- Krackhardt, D. (1990). Assessing the political landscape: Structure, cognition, and power in organizations. *Administrative science quarterly*, 342-369.
- Lance, C. E., Butts, M. M., & Michels, L. C. 2006. The sources of four commonly reported cutoff criteria: What did they really say? *Organizational Research Methods*, 9: 202-220.
- Lazarus, R. S., Opton, E. M., Jr., Nomikos, M. S., & Rankin, N. O. 1965. The principle of short-circuiting of threat: Further evidence. *Journal of Personality*, 33: 622-635.
- Lee, T.W., & Mitchell, T.R. 1994. An alternative approach: The unfolding model of voluntary employee turnover. *Academy of Management Review*, 19: 51-89.
- Lee, T. W., Mitchell, T. R., Sablinski, C. J., Burton, J. P., & Holtom, B. C. 2004. The effects of job embeddedness on organizational citizenship, job performance, volitional absences, and voluntary turnover. *Academy of Management Journal*, 47(5), 711-722.
- Leventhal, G. S. 1980. What should be done with equity theory? New approaches to the study of fairness in social relationships. In K. Gergen, M. Greenberg, & R. Willis (Eds.), *Social Exchange: Advances in Theory and Research* (pp. 27-55). New York: Plenum Press.
- Lind, E. A. 2001. Fairness heuristic theory: Justice judgments as pivotal cognitions in organizational relations. In J. Greenberg & R. Cropanzano (Eds.), *Advances in Organizational Justice* (pp. 56-88). Stanford, CA: Stanford University Press.
- Lind, E. A., & Van den Bos, K. 2002. When fairness works: Toward a general theory of uncertainty management. In B. M. Staw & R. M. Kramer (Eds.), *Research in Organizational Behavior* (Vol. 24, pp. 181-223). Boston, MA: Elsevier.
- Mansour-Cole, D.M. & Scott, S.G. 1998. Hearing it though the grapevine: The influence of source, leader-relations, and legitimacy on survivors' fairness perceptions. *Personnel Psychology*, 51: 25-54.
- Marks, M. L., & Mirvis, P. H. (1992). Rebuilding after the merger: Dealing with "survivor sickness". *Organizational Dynamics*, 21(2), 18-32.
- Mayer, R. C., Davis, J. H., & Schoorman, F. D. 1995. An integrative model of organizational trust. *Academy of Management Review*, 20: 709-734.

- Michela, J. L., & Vena, J. (2012). A Dependence-Regulation Account of Psychological Distancing in Response to Major Organizational Change. *Journal of Change Management*, 12(1), 77-94.
- Miller, K. I., & Monge, P. R. 1985. Social information and employee anxiety about organizational change. *Human Communication Research*, 11: 365-386.
- Mitchell, T. R., Holtom, B. C., Lee, T. W., Sablinski, C. J., & Erez, M. (2001). Why people stay: Using job embeddedness to predict voluntary turnover. *Academy of Management Journal*, 44(6), 1102-1121.
- Mitchell, T. R., Holtom, B. C., Lee, T. W., Sablinski, C. J., & Erez, M. (2001). Why people stay: Using job embeddedness to predict voluntary turnover. *Academy of management journal*, 44(6), 1102-1121.
- Morrell, K. M., Loan-Clarke, J., & Wilkinson, A. J. 2004. Organisational change and employee turnover. *Personnel Review*, 33(2): 161 – 173.
- Myers, R. H. 1990. *Classical and Modern Regression with Applications*. PWS-Kent Publishing Company.
- Newman, J. M., & Krzystofiak, F. J. 1993. Changes in Employee Attitudes after an Acquisition A Longitudinal Analysis. *Group & Organization Management*, 18(4), 390-410.
- Oreg, S., Michel, A., & By, R.T. 2012. *The psychology of organizational change: Viewing change from the employee's perspective*. Cambridge, UK: Cambridge University Press.
- Podolny, J. M., & Baron, J. N. (1997). Resources and relationships: Social networks and mobility in the workplace. *American Sociological Review*, 673-693.
- Rafferty, A. E., & Restubog, L. D. 2010. The impact of change process and context on change reactions and turnover during a merger. *Journal of Management*, 36(5): 1309-1338.
- Rodell, J. B., & Colquitt, J. A. (2009). Looking ahead in times of uncertainty: The role of anticipatory justice in an organizational change context. *Journal of Applied Psychology*, 94(4), 989.
- Russ, T. L. 2008. Communicating change: A review and critical analysis of programmatic and participatory implementation approaches. *Journal of Change Management*, 8: 199-211.
- Scheck, C. L., & Kinicki, A. J. (2000). Identifying the antecedents of coping with an organizational acquisition: A structural assessment. *Journal of Organizational Behavior*, 21(6), 627-648.
- Schweiger, D., & DeNisi, A. 1991. Communication with employees following a merger: A longitudinal field experiment. *Academy of Management Journal*, 34: 110-135.

- Seo, M. G., & Hill, N. S. (2005). Understanding the Human Side of Merger and Acquisition: An Integrative Framework. *The Journal of Applied Behavioral Science*, 41(4), 422-443.
- Siegel, D. S., & Simons, K. 2010. Assessing the Effects of Mergers and Acquisitions on Firm Performance, Plant Productivity, and Workers: New Evidence from Matched Employer-Employee Data. *Strategic Management Journal*, 31(8): 903-916.
- Smith, C. A., & Ellsworth, P. C. (1985). Patterns of cognitive appraisal in emotion. *Journal of personality and social psychology*, 48(4), 813.
- Smith, C. A., & Kirby, L. D. (2009). Putting appraisal in context: Toward a relational model of appraisal and emotion. *Cognition and Emotion*, 23(7), 1352-1372.
- Sparrowe, R. T., Liden, R. C., Wayne, S. J., & Kraimer, M. L. (2001). Social networks and the performance of individuals and groups. *Academy of Management Journal*, 44(2), 316-325.
- Spector, P. E. (1992). Summated rating scale construction: An introduction (No. 82). Sage.
- Spector, P. E. 2006. Method variance in organizational research: Truth or urban legend? *Organizational Research Methods*, 9: 221-232.
- Stanley, D. J., Meyer, J. P., & Topolnytsky, L. 2005. Employee cynicism and resistance to organizational change. *Journal of Business & Psychology*, 19(4): 429-459.
- Sutton, R. I. (1987). The process of organizational death: Disbanding and reconnecting. *Administrative Science Quarterly*. 32, 542-569.
- Thibaut, J., & Walker, L. 1975. *Procedural justice: A psychological analysis*. Hillsdale, NJ: Erlbaum.
- Tomaka, J., Blascovich, J., Kelsey, R. M., & Leitten, C. L. 1993. Subjective, physiological, and behavioral effects of threat and challenge appraisal. *Journal of Personality and Social Psychology*. 65: 248-260.
- Tomaka, J., Blascovich, J., Kibler, J., & Ernst, J. M. 1997. Cognitive and Physiological Antecedents of Threat and Challenge Appraisal. *Journal of Personality and Social Psychology*, 73: 63-72.
- Turner, J. C. (1982). Toward a cognitive redefinition of the social group. In H. Taifel (Ed.), *Social identity and intergroup relations*. Cambridge: Cambridge University Press.
- Tyler, T. R., & Lind, E. A. 1992. A relational model of authority in groups. In M. P. Zanna (Ed.), *Advances in Experimental Social Psychology* (Vol. 25, pp. 115–191). San Diego, CA: Academic Press

- Van den Bos, K. 2001a. Fairness heuristic theory: Assessing the information to which people are reacting has a pivotal role in understanding organizational justice. In S. Gilliland, D. Steiner, & D. Skarlicki (Eds.), *Theoretical and Cultural Perspectives on Organizational Justice* (pp. 63–84). Greenwich, CT: Information Age Publishing.
- Vogt, P. (2007). Group size effects on the emergence of compositional structures in language. In *Advances in Artificial Life* (pp. 405-414). Springer Berlin Heidelberg.
- Vytal, K., Cornwell, B., Arkin, N., & Grillon, C. 2012. Describing the interplay between anxiety and cognition: From impaired performance under low cognitive load to reduced anxiety under high load. *Psychophysiology*, 49: 842-852.
- Wanberg, C. R., Banas, J. T. 2000. Predictors and outcomes of openness to changes in a reorganizing workplace. *Journal of Applied Psychology*, 85(1): 132-142.
- Wanous, J.P., Reichers, A.E., & Austin, J.T. 2000. Cynicism about organizational change: Measurement, antecedents, and correlates. *Group & Organization Management*, 25: 132-153.

Tables and Figures

Table 1. Means, Standard Deviations, and Intercorrelations

Variable	M	SD	1	2	3	4	5	6	7	8
1. Change Management History	3.39	1.27	0.85							
2. Quality of Change Communication	3.23	1.73	.56**	0.94						
3. Anxiety about Change	5.4	1.65	-.24**	-.24**	0.87					
4. Procedural Fairness in Restructuring	3.14	1.49	.58**	.70**	-.17**	0.96				
5. Threat Appraisal	4.74	1.54	-.42**	-.52**	.35**	-.55**	0.89			
6. Turnover Intentions	2.51	1.19	-.34**	-.35**	.05	-.43**	.45**	0.93		
7. Global Job Embeddedness	3.78	1.66	.29**	.28**	-.04	.43**	-.25**	-.57**	0.91	
8. Job Search	1.73	0.89	-.23**	-.25**	.09*	-.33**	.31**	.57**	-.39**	0.92

Note . Listwise N = 763; ** significant at the .01 level; * significant at the .05 level; reliability estimates listed on the diagonal.

Table 2. Results of a Confirmatory Factor Analysis Including all Study Variables

	X ²	df	RMSEA	NNFI	CFI	SRMR
One-factor model	8046.31	902	.18	.89	.89	.12
Eight-factor model	2308.79	881	.06	.98	.98	.05

Note. All chi-square values are statistically significant at $p = .00$; df = degrees of freedom; RMSEA = root mean square error of approximation; NNFI = non-normed fit index; CFI = comparative fit index; SRMR = standardized root mean square residual.

Table 3. Mediation Model*Direct and Indirect Effects of Change Variables on Turnover Intentions Through Threat Appraisal*

Predictor Variables	Threat Appraisal	Turnover Intentions			BCa 95% CI	
	(a)	(b)	(c')	(ab)	Lower	Upper
Independent variable						
Quality of Change Communication	-.22**		.02	-.05*	-.08	-.02
Procedural Fairness in Restructuring	-.34**		-.11*	-.07*	-.12	-.04
Change Management History	.00		-.10*	.00	-.03	.03
Anxiety about Change	.22**		-.09**	.05*	.03	.08
Intervening mechanisms						
Threat Appraisal		.21**				
Control Variable						
Job Search			.53**			

*Note: DV=Embeddedness; 10,000 bootstrap samples; ** $p < .01$, * $p < .05$; (c') direct effect; (ab) indirect effect; control variable included job search. Total Effects Model Summary ($R = .62$; $R^2 = .39$; $F = 51.94$); Indirect Effects Model Summary ($R = .66$; $R^2 = .43$; $F = 51.42$).*

Table 4. Interaction Effects of Job Embeddedness and Change Variables on Threat Appraisal

		β	Std. Error
Step 1	Predictor		
	Quality of Change Communication	-.21**	.05
	Procedural Fairness in Restructuring	-.33**	.06
	Change Management History	-.04	.06
	Anxiety about Change	.25**	.04
	Job Embeddedness	-.04	.04
<i>Note.</i> DV = Threat appraisal; **p < .01, *p < .05			
		Job Embeddedness	
		β	Std. Error
Step 2	Predictor		
	Quality of Change Communication	-.23**	.05
	Procedural Fairness in Restructuring	-.32**	.06
	Change Management History	-.03	.06
	Anxiety about Change	.27**	.04
	Job Embeddedness	-.04	.04
	Interaction Term		
	Quality of Change Communication x JE	.18*	.03
	Procedural Fairness in Restructuring x JE	-.72**	.04
	Change Management History x JE	.18	.04
	Anxiety about Change x JE	.09	.02
<i>Note.</i> DV = Threat appraisal; **p < .01, *p < .05			

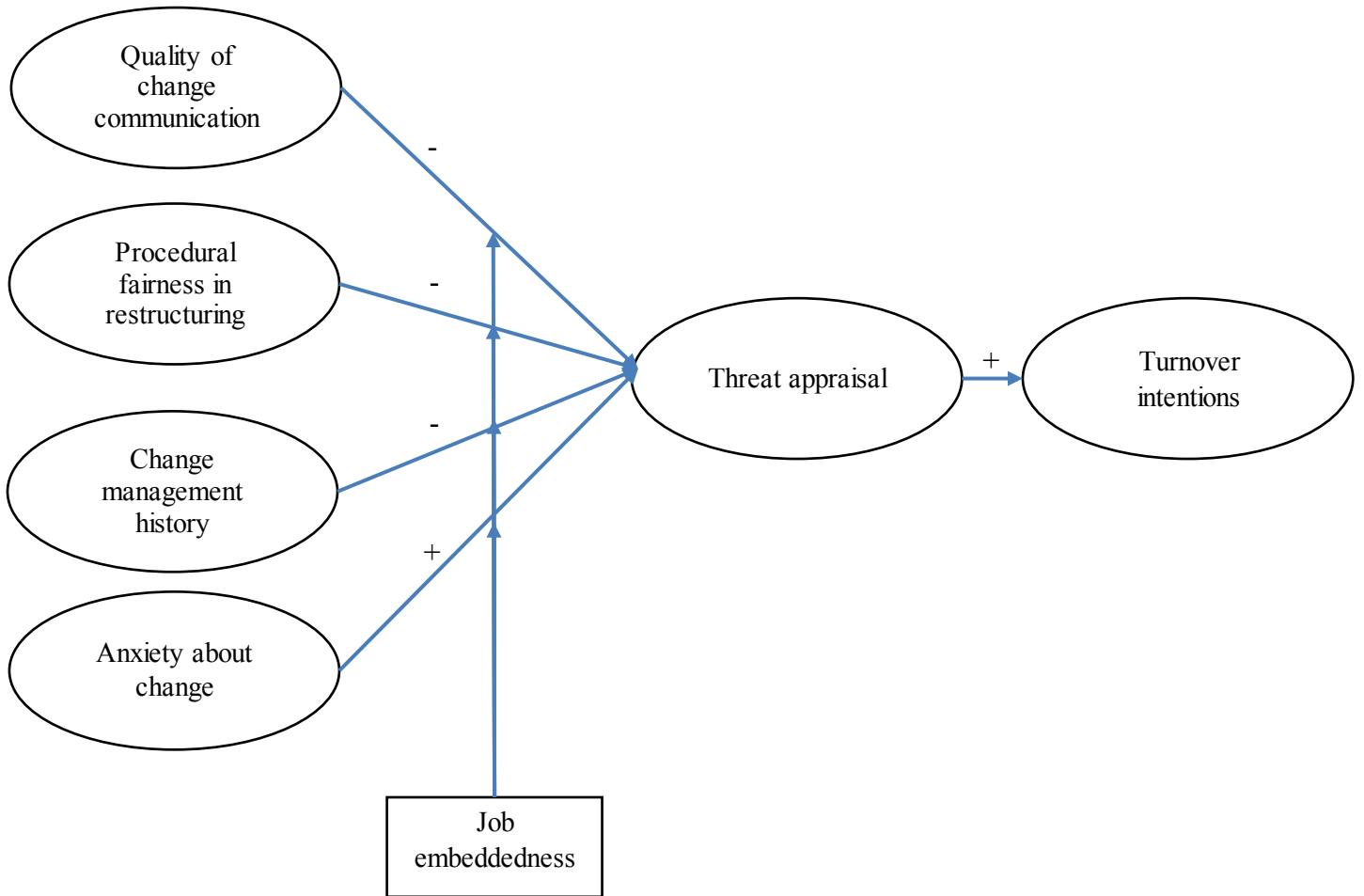


Figure 1: Research Model

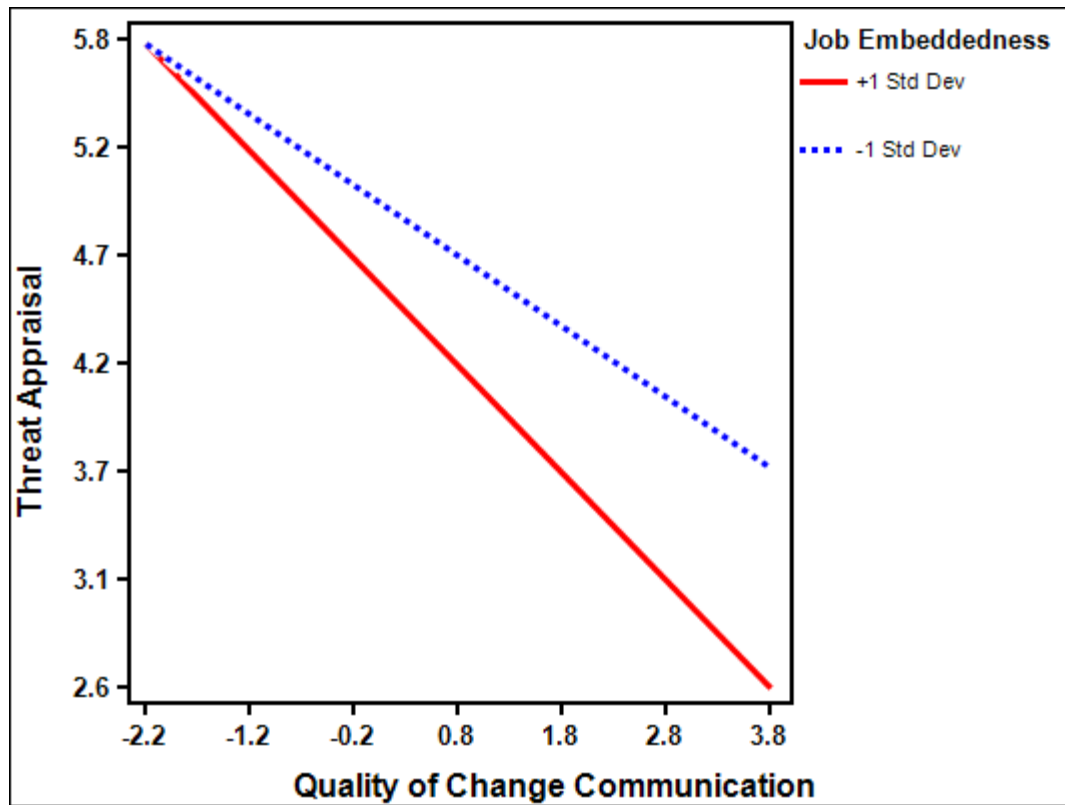


Figure 2: Interaction Plot of Job Embeddedness and Quality of Change Communication

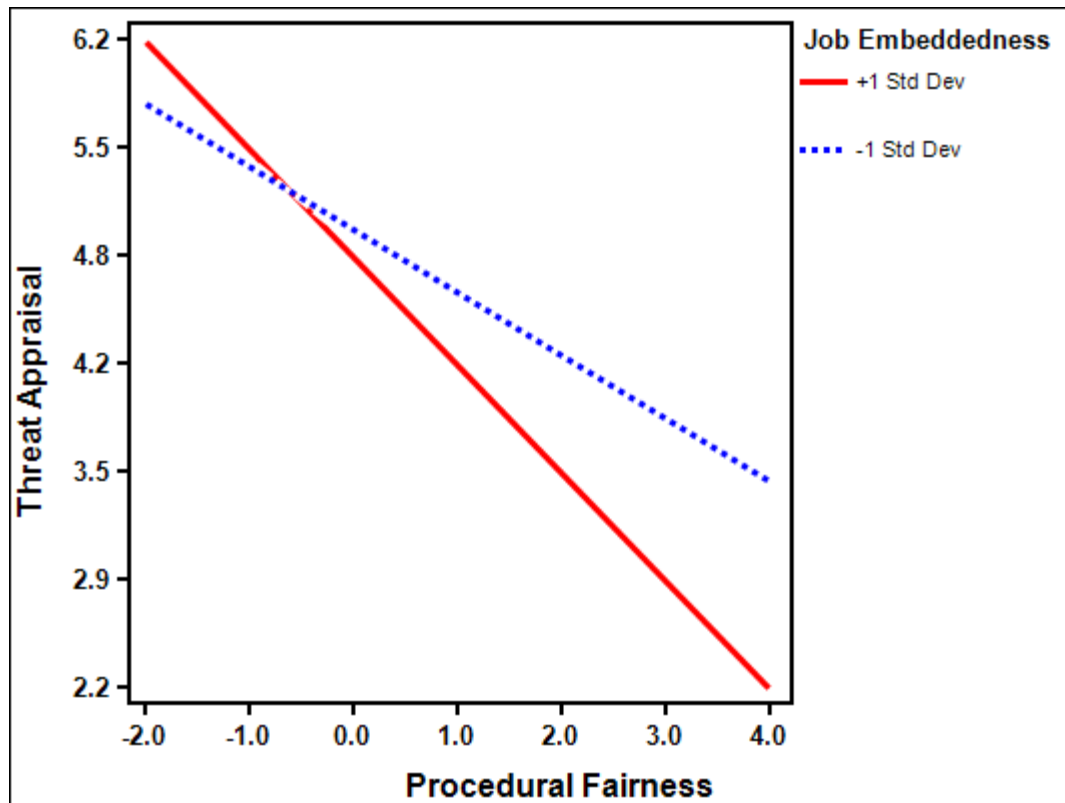


Figure 3: Interaction Plot of Job Embeddedness and Procedural Fairness in Restructuring

Appendix

Confirmatory Factor Analysis Results

Scale Items	Standardized Loadings
Anxiety About Change (strongly disagree = 1 to strongly agree = 7)	
I feel anxious about possible changes that might occur at my organization.	.77
I worry about work-related issues.	.87
I am highly concerned about the changes at work these days.	.87
Change Management History (strongly disagree = 1 to strongly agree = 7)	
In my experience:	
organizational change has been positive.	.85
organizational change has been managed well.	.87
organizational change has had a positive impact on the quality of service delivery.	.83
organizational change has improved organizational performance and effectiveness.	.84
the impact of change on employee well-being was an important consideration.	.72
Job Embeddedness (strongly disagree = 1 to strongly agree = 7)	
I feel attached to the organization.	.78
It would be difficult for me to leave this organization.	.87
I'm too caught up in this organization to leave.	.84
I feel tied to this organization.	.72
I simply could not leave the organization that I work for.	.77
It would be easy for me to leave this organization (R)	.71
I am tightly connected to this organization.	.83
Procedural Fairness in Restructuring (strongly disagree = 1 to strongly agree = 7)	
When decisions are made about job reductions and reassignments, management treats me with kindness and respect.	.80
Management makes sure that all employee concerns are heard before job changes and elimination decisions are made.	.82
When making decisions about job changes and eliminations, management offers explanations that make sense to me.	.84
When decisions are made about my job, management is sensitive to my personal needs.	.84
To make restructuring decisions, management collects all the necessary information.	.79
Management explains very clearly all decisions made about restructuring.	.85

Procedural Fairness in Restructuring (Cont'd)

When decisions are made about job changes and eliminations, my manger and others in management treat me with respect and dign ity.	.8
When decisions are made about restructuring, management deals with me in a truthful manner.	.80
Management clarifies decisions and provides additional information when requested by employees.	.86
When decisions are made about job changes and eliminations, management shows concern for my rights as an employee.	.87
All job decisions are applied consistently across all affected employees.	.71
Employees are allowed to challenge or appeal job decisions made by management.	.66
People at my job level have adequate input into the restructuring decision process.	.73
Procedures are in place to provide employees with timely information about restructuring.	.71

Quality of Change Communication (strongly disagree = 1 to strongly agree = 7)

The official information I have received about the changes at my organization:	
has been useful.	.90
has adequately answered my questions about the changes.	.91
has been communicated appropriately.	.91
has been timely.	.86
has been accurate.	.82

Threat Appraisal (not at all threatened = 1 to threatened to a great extent = 5)

Due to the changes, to what extent do you feel that each of the following is threatened (a possibility that it will get worse in the future)?	
Your job security?	.75
Relationships with your coworkers.	.66
Relations with your supervisor.	.71

Threat Appraisal (Cont'd)

Desirability of your job (i.e., aspects you like).	.82
Personal job opportunities within your organization.	.75
Your pay and benefits.	.74
Your general working conditions.	.82

Turnover Intentions

What are the chances that you will leave the organization during the next 12 months? (no chance, 25%, 50%, 75%, 100%)	.93
I intend to leave my organization during the next 12 months. (definitely not, probably not, uncertain, probably yes, definitely yes)	.97
I intend to quit my present job. (definitely not, probably not, uncertain, probably yes, definitely yes)	.82

Fit Statistics. $X^2 = 2308.79, p = .00; df = 881; RMSEA = .06; NNFI = .98; CFI = .98; SRMR = .05$